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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,090	07/31/2001	Kevin Collins	10006963-1	2456
7590	09/23/2005		EXAMINER	
HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, CO 80527-2400			PHAM, HUNG Q	
			ART UNIT	PAPER NUMBER
			2162	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/919,090	COLLINS ET AL.	
	Examiner HUNG Q. PHAM	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 June 2005.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 30-48 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 30-48 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 30, 36, 41 and 46 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

Applicant is advised that should claim 41 be found allowable, claim 43II be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: *a first signal, a second signal, a third signal* as in claims 33, 39, 41 and 46.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 31, 37 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As recited in claims 31 and 37, the step of *generating a signal when an amount of available storage capacity on the storage device falls below a threshold* was not described in the specification.

As recited in claim 41, the step of *generating a signal when an amount of available storage capacity on the storage device falls below a threshold* was not described in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30, 31, 36 and 37 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Olarig et al. [6,647,415 B1].

Regarding claims 30 and 36, Olarig teaches *a method of managing storage space on a storage device associated with a computer system* (Abstract), comprising:

sorting a plurality of data files on the storage device into one or more categories based on at least one characteristic of the data files (Col. 3, Lines 10-16, data in the storage device is grouped based on least recently used); and

reallocating a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold (FIG. 2, step 206, Col. 3, Lines 10-16).

Regarding claims 31 and 37, Olarig teaches all the claim subject matters as discussed above with respect to claims 30 and 36, Olarig further discloses the step of *generating a signal when an amount of available storage capacity on the storage device falls below a threshold* (Col. 3, Lines 20-24).

Claim Rejections - 35 USC § 103

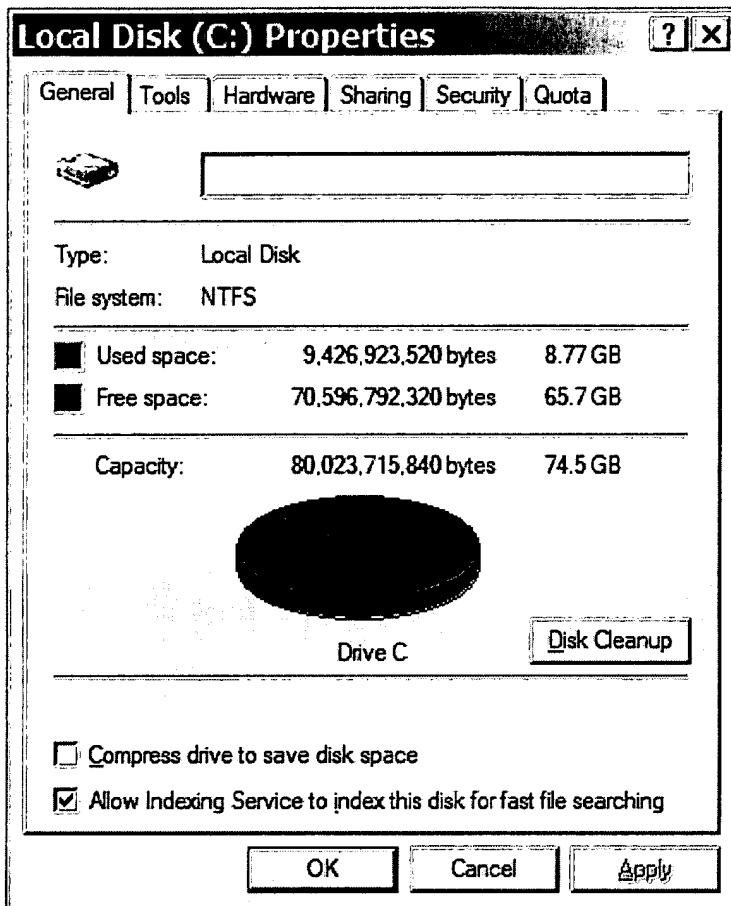
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 32-35 and 38-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olarig et al. [6,647,415 B1] in view of Window 98.

Regarding claims 32 and 38, Olarig teaches all the claim subject matters as discussed above with respect to claims 30 and 36, but fails to teach the step of *presenting, in a user interface, an indicia of an amount of data storage consumed by a category of data files; and presenting, in the user interface, one more reallocation operations applicable to a category of data files*. However, a PC using operating system such as Window 98 has *a user interface presents an indicia of an amount of data storage consumed by a category of data files and one or more reallocation operations applicable to a category of data files* (double click on My Computer, right click on the C drive icon to have the user interface below, compress drive and allowing indexing service as *one or more reallocation operations applicable to a category of data files*).



It would have been obvious for one of ordinary skill in the art at the time the invention was made to have a user interface as in Window 98 in order to keep track the consumed data storage.

Regarding claims 33 and 39, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claims 32 and 38, Olarig further discloses the step of *receiving, from the user interface, a first signal identifying a capacity threshold* (Col. 3, Lines 26-31), *a second signal identifying a reallocation operation* (Col. 3, Lines 10-16, moving data to network server's storage as *second signal identifying a reallocation operation*) and *a third signal identifying a category of data files to which the reallocation*

operation is applicable (Col. 3, Lines 10-13); and *applying the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold* (FIG. 2, step 206, Col. 3, Lines 10-16).

Regarding claims 34 and 40, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claims 33 and 38, Olarig further discloses the step of *applying the reallocation operation to the category of data files identified in the signal comprises performing an operation selected from the group of operations consisting of deleting a file, compressing a file, moving a file, and archiving a file* (FIG. 2).

Regarding claim 35, Olarig teaches all the claim subject matters as discussed above with respect to claim 30, but fails to teach the step of *sorting file in a file allocation table based on a file extension associated with the file*. Window 98 has the technique of *sorting file in a file allocation table based on a file extension associated with the file*. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include the technique of sorting file based on file extension in order to categorize file in a file system.

Regarding claim 41, Olarig teaches an apparatus, comprising:
a processor (Col. 2, Lines 46-50, a the disclosed computer implies a processor is included in the computer);
a storage device communicatively connected to the processor (Col. 3, Lines 3-5);

a memory module comprising logic instructions recorded in a computer-readable medium which, when executed by a processor, configure the processor to (Col. 2, Lines 50-55):

generate a signal when an amount of available storage capacity on the storage device falls below a threshold (Col. 3, Lines 20-24), *and, in response to the signal, to:*

receive, from the user interface,

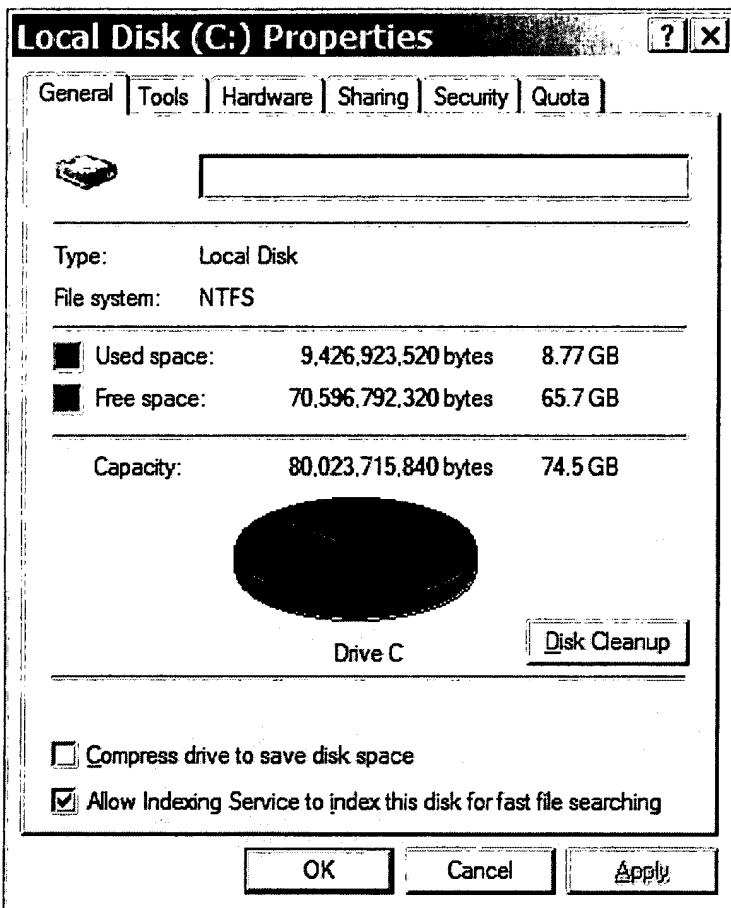
a first signal identifying a capacity threshold (Col. 3, Lines 26-31),

a second signal identifying a reallocation operation (Col. 3, Lines 10-16, moving data to network server's storage as *second signal identifying a reallocation operation*) and

a third signal identifying a category of data files to which the reallocation operation is applicable (Col. 3, Lines 10-13); and

apply the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold (FIG. 2, step 206, Col. 3, Lines 10-16).

The missing of Olarig apparatus is the step of *presenting, in a user interface, an indicia of an amount of data storage consumed by a category of data files and one more reallocation operations applicable to a category of data files*. However, a PC using operating system such as Window 98 has *a user interface presents an indicia of an amount of data storage consumed by a category of data files and one or more reallocation operations applicable to a category of data files* (double click on My Computer, right click on the C drive icon to have the user interface below, compress drive and allowing indexing service as *one or more reallocation operations applicable to a category of data files*).



It would have been obvious for one of ordinary skill in the art at the time the invention was made to have a user interface as in Window 98 in order to keep track the consumed data storage.

Regarding claim 42, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claim 41, Olarig further discloses the steps of *sorting a plurality of data files on the storage device associated into one or more categories based on at least one characteristic of the data files* (Col. 3, Lines 10-16, data in the storage device is grouped based on least recently used); and *reallocating a portion of*

the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold (FIG. 2, step 206, Col. 3, Lines 10-16).

Regarding claim 43, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claim 41, the claimed subject matter as in claim 43 is disclosed by Window 98 as discussed in claim 41.

Regarding claim 44, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claim 42, Olarig further discloses the step of *monitoring storage capacity consumed by the category of data files* (FIG. 2, step 202); and *applying a reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding a capacity threshold* (FIG. 2, step 206, Col. 3, Lines 10-16).

Regarding claim 45, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claim 41, Olarig further discloses the step of *performing an operation selected from the group of operations consisting of deleting a file, compressing a file, moving a file, and archiving a file* (FIG. 2).

Regarding claim 46, Olarig teaches *a computer system, comprising: a processor* (Col. 2, Lines 46-50, a the disclosed computer implies a processor is included in the computer),

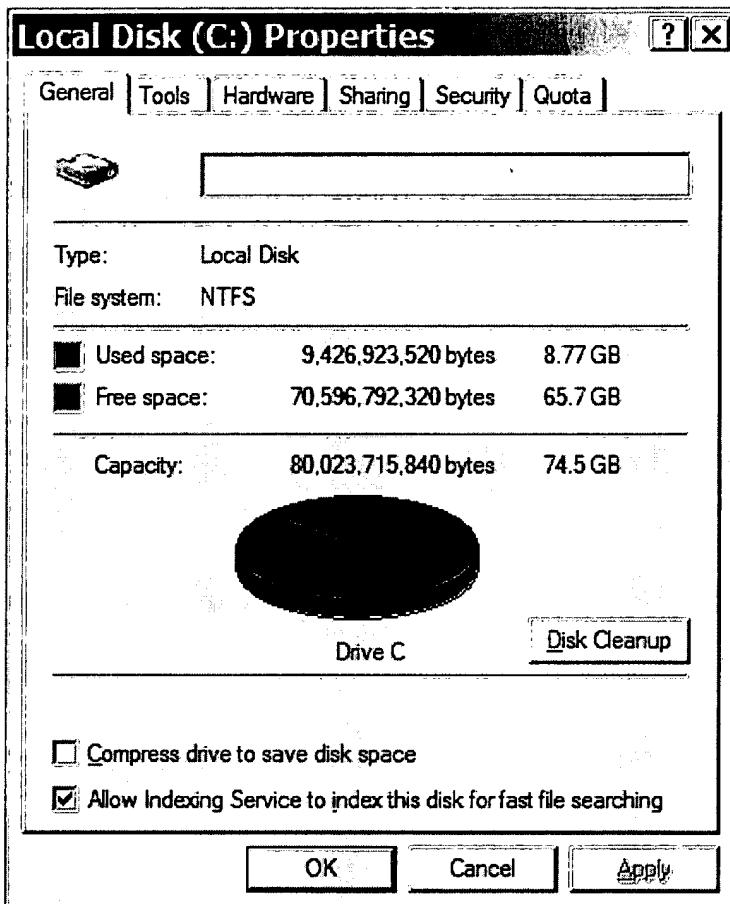
a storage device communicatively connected to the processor (Col. 3, Lines 3-5);
a memory module comprising logic instructions recorded in a computer-readable medium
which, when executed by a processor, configure the processor to (Col. 2, Lines 50-55):

receive
a first signal identifying a capacity threshold (Col. 3, Lines 26-31),
a second signal identifying a reallocation operation (Col. 3, Lines 10-16, moving
data to network server's storage as *second signal identifying a reallocation operation*)
and
*a third signal identifying a category of data files to which the reallocation operation is
applicable* (Col. 3, Lines 10-13);
*monitor a storage capacity consumed by the category of data files identified by the third
signal* (FIG. 2, step 202); and
*apply a reallocation operation to the category of data files identified by the third signal
when the category of data files identified by the third signal consumes an amount of storage
exceeding the capacity threshold identified by the first signal* (FIG. 2, step 206, Col. 3,
Lines 10-16).

The missing of Olarig teaching is *a user interface to present an indicia of an amount of
data storage consumed by a category of data files and one more reallocation operations applicable to
the category of data files.*

However, a PC using operating system such as Window 98 has *a user interface
presents an indicia of an amount of data storage consumed by a category of data files and one or more
reallocation operations applicable to a category of data files* (double click on My Computer, right

click on the C drive icon to have the user interface below, compress drive and allowing indexing service as *one or more reallocation operations applicable to a category of data files*).



It would have been obvious for one of ordinary skill in the art at the time the invention was made to have a user interface as in Window 98 in order to keep track the consumed data storage.

Regarding claim 47, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claim 46, Olarig further discloses the claimed *the reallocation operation includes an operation selected from the group of operations consisting of deleting a file, compressing a file, moving a file, and archiving a file* (FIG. 2).

Regarding claim 48, Olarig and Window 98, in combination, teach all of the claimed subject matter as discussed above with respect to claim 46, Olarig further discloses the steps of *sorting a plurality of data files on the storage device associated into one or more categories based on at least one characteristic of the data files* (Col. 3, Lines 10-16, data in the storage device is grouped based on least recently used); and *reallocating a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold* (FIG. 2, step 206, Col. 3, Lines 10-16).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. PHAM whose telephone number is 571-272-4040. The examiner can normally be reached on Monday-Friday.

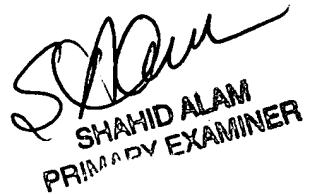
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E. BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HUNG Q PHAM
Examiner
Art Unit 2162

September 14, 2005



SHAHID ALAM
PRIMARY EXAMINER